

Release A CDR RID Report

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Originator Chris Lynnes

Phone No (301) 286-2260

Organization GSFC DAAC

E Mail Address lynnes@daac.gsfc.nasa.gov

Document Data Server Hardware

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Priority 2

Section

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Figure Table

Category Name Data Server (DSS) Design

Actionee ECS

Sub Category

Subject Temporal variability in Distribution sizing

Description of Problem or Suggestion:

Disk sizing for media and electronic distribution is equal to 1X or 1X *2 days. However, the 2X (1 media/1 electronic) is a long-term average requirement. Actual requests will vary over time both in volume and media/electronic ratio. Thus sizing does not allow for temporal variation in the requests. What's more, you can't do requests ahead of time during light periods, making the use of a straight average for this sizing problematic.

Furthermore, the 2 day accumulation assumption for electronic distribution is a problem because 48 hours is around the average delay time from user notification to user pull at GDAAC. However, DAAC current policy is 72 hours, with recommendation from DAAC project scientist to extend to one week, before data expires. As 48 hours is the average over a long time, this does not allow margin for variability in user delays. (LaRC also allows 1 week before expiration)

Originator's Recommendation

Include a temporal variability factor into the sizing assumptions to maintain DAAC response times to users during periods of moderately heavy request volumes or abnormal media/electronic ratios.

Also, extend the electronic distribution accumulation assumption to at least 72 hours to allow users more time to retrieve data.

GSFC Response by:

GSFC Response Date

HAIS Response by: Mark Huber

HAIS Schedule 10/25/95

HAIS R. E. Mark Huber

HAIS Response Date 11/15/95

The overall sizing of 2X distribution is per ESDIS direction.

For media distribution, disk capacity (associated with the DIPHW component) is provided to accommodate up to 1X data to be distributed on media per day. There is sufficient time to buffer and write the 1X distribution volumes at each site.

The 48 hour residency time on the electronic pull disks (associated with the ACMHW component) was originally based on the GDAAC sizing. (Since the time the ECS sizing was done, the GDAAC has upgraded their disk capacity to handle an average of 72 hours of data.) The disks provided will accommodate up to 1X data to be distributed electronically per day, plus about 2 GB of data to be ingested from external sources.

It should be noted that this 48 hour average residency time is for sizing purposes only. It is expected that some data will have a significantly shorter residency time (e.g., Q/A data to be pulled), thereby allowing for other data to remain on the pull volumes for longer than 48 hours. Residency (purging) times are tunable by the DAAC, and more disk can be added at a later time if required.

Status **Closed**

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Sponsor **Kobler**

***** Attachment if any *****